

**Amendments to the Specification:**

At page 24, please replace the paragraph spanning lines 18-29, with the following replacement paragraph.

By the phrase "nucleic acid based signal transducer" or "signal transducer" including plural forms is meant a conformationally sensitive and responsive portion of a probe described herein that desirably responds to the presence (or absence) of one or more target agents. Particular transducers generally include nucleic acid sequences (e.g., DNA, RNA or combinations thereof), but may also include non-nucleotide sequences and particularly nucleotide analogues (e.g., thio-, aminoally-, and methyl-derivatives of adenosine, thymidine, guanosine, cytidine, and ~~uridine~~ uridine mono-phosphates; inosine, queuosine, wybutosine, and pseudouridine mono-phosphates; and other derivatives thereof). Also envisioned are nucleic acid based signal transducers that include one or more radionucleotides e.g.,  $^3\text{H}$ ,  $^{32}\text{P}$ ,  $^{33}\text{P}$ ,  $^{35}\text{S}$ , and  $^{125}\text{I}$ . Signal transducers in accord with the invention can be single-stranded, double-stranded, or a combination thereof and have a length of typically less than about 250 base pairs, preferably less than about 150 base pairs, more preferably between about 3 to about 100 base pairs.

At page 42, please delete the paragraph spanning line 20, to page 43, line 9, and insert the following replacement paragraph:

The affinity probes according to the invention are useful for detecting various receptor agents. In the present invention, the terms "receptor" and "ligand" are used with broadly to encompass one part of a binding pair. By the term "receptor or receptor agent" as used herein is meant nearly any molecular entity which specifically binds to a complementary molecular entity that is referred to herein as a "ligand" such as a probe ligand. Examples of the receptor agents include, but are not limited to, proteins, glycoproteins, polypeptides, carbohydrates, lipids, phospholipids, nucleic acids, antibodies, antibody fragments, enzymes, substrates or inhibitors of enzymes, hormones, antibiotics, narcotics, toxins, polypeptides, proteins, protein fragments, targeting sequences or transit peptides, glycoproteins, lipids, phospholipids, ~~polysaccharides~~ polysaccharides, carbohydrates, nucleic acids, peptide nucleic acids, and the like. Nearly any kind of ligands can be used as probe ligands as long as there is specificity in the binding of the receptor agent to the probe ligand and also such binding causes the desired conformational change. Additional consideration for conjugating the probe ligand is that conjugation of the probe ligand must not prohibit or substantially interfere the binding of the receptor agent.

At page 46, please delete the paragraph spanning line 4 to line 13, delete the paragraph and add the following replacement paragraph:

Particular cleavage probes according to the invention are useful for detecting reaction-inducing agents having specific activities for cleaving the cleavage sites. As has been mentioned, the invention is flexible and is not limited to use of any particular cleavage site. Examples of the cleavage sites include, but not limited to, those specific to various enzymes having ~~endogenous~~ endogenous cleavage activities such as proteases, endonucleases, lipases, and glycosidases. Chemical cleaving reagents such as cyanogen bromide (CNBr) and hydroxylamine (NH<sub>2</sub>-OH) that are known to specifically cleave particular peptide bonds are also envisioned. Identity of the cleavage site varies depending on the reaction-inducing agent. For instance, the cleavage site will be an amino acid sequence for a protease, a double stranded DNA sequence for an endonuclease, a lipid for a lipase, and a carbohydrate for a glycosidase.